



ES-4810 Ethernet Switch Release Notes

Management Module System Software Revision: 4.7.3

ATM Uplink System Software Revision: 4.2.1

MANU0298-01 - Rev. A - 3/31/98

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1.0 General Description of Release

These release notes specify known issues for the FORE Systems ES-4810 Ethernet switch. This release supports the following software versions on the management modules and ATM uplinks:

- Management Module System Software Revision 4.7.3
- ATM Uplink System Software Revision 4.2.1

2.0 Known Issues or Concerns

2.1 General

- Fiber ports are always fixed speed (either 10 Mbps or 100 Mbps).
- Note that when swapping Ethernet hosts from one ES-4810 to another, if you perform a one-for-one swap of two hosts, each ES-4810 will mistakenly believe that both MAC addresses are local to themselves. They will not forward traffic between these MAC addresses until the address aging timers expire.
- “Non-leaky” VLANs are not supported. The VLANs that are supported by the ES-4810 filter multicasts and broadcasts, but do not filter directed unicasts. (This is the same functionality as the FORE Systems ES-3810.)
- You cannot use multiple ATM or Ethernet uplinks between two ES-4810s.

2.2 Management Modules

2.2.1 NMM-1 and NMM-2 Modules

- The system is limited to one uplink port per packet bus when an NMM-1 or NMM-2 is attached to the bus. No Ethernet ports may be placed in any of the uplink modes while an ATM uplink module is attached to the packet bus, because the ATM Uplink acts as the single allowed uplink port.
- The NMM-1 and NMM-2 modules support only four MAC addresses per Ethernet port. To allow more than four MAC addresses per port you must use an NMM-SEG-1.
- For the best performance, systems with an NMM-1 or NMM-2 module and an ATM uplink on the same packet bus should have all ports set to `limited` forwarding mode. (Traffic destined for MAC addresses registered with the LEC are always flooded to any Ethernet ports set to `normal` forwarding mode.)
- More than one NMM-1 or NMM-2 module can be attached to a packet bus, but only one of the modules can be ATM enabled.

2.2.2 NMM-SEG-1 Modules

- With either a segment module or non-segment module, if you have more than 4 MAC addresses attached to a port, you must place the port in `uplink` forwarding mode.
- When using an NMM-SEG-1 module with the central CAM enabled, the limited forwarding mode is deactivated. Ports configured with the `limited` forwarding mode behave like ports configured with `normal` forwarding mode. Unicast frames addressed to unknown destinations are flooded.

A unicast address located on an ELAN does not become known when the ATM uplink receives a positive response to its `LE_ARP` request. The address becomes known to the NMM-SEG-1 only when the NMM-SEG-1 detects a packet bus transmission with this MAC address in the Ethernet source field (i.e. a packet received by the ATM uplink over the ELAN and then forwarded to the packet bus).

The `escam disable` command will disable the central CAM, thus disabling segment capability and restoring the original behavior of the `limited` mode, in which there is no flooding of unknown unicasts.

- Only one NMM-SEG-1 module can be attached to a given packet bus. An NMM-1 or NMM-2 module can also be attached to the same packet bus as the NMM-SEG-1, but only the NMM-SEG-1 module on the packet bus should have the ATM uplink enabled (using the `atmuplink enable` command).
- There is only **one** Spanning Tree instance per packet bus equipped with an NMM-SEG-1 segment module. Also Spanning Tree may only run over **one** ELAN configured on the ATM uplink. Other VLANs and associated ELANs on the same packet bus and ATM uplink must not have Spanning Tree enabled.
- By default each NMM-SEG-1 is shipped with the CAM logic disabled. This is because damage could occur if two NMM-SEG-1's are placed on the same packet bus while the CAM logic is enabled. Use the `escam enable` command to turn on the CAM. Use the `stb enable` command to turn on Spanning Tree. When you remove an NMM-SEG-1, use the `escam disable` command to disable the CAM logic.
- The NMM-SEG-1 allows multiple uplink ports on the same packet bus. Any port with more than four MAC addresses attached to it should be configured to use the `uplink` mode.

2.3 ATM Uplink Modules

- To configure Spanning Tree, use the commands for the NMM-SEG-1 Management Module, as described in the *ES-4810 Management Module Operations Guide*. Do not use the Spanning Tree functionality in the ATM Uplink user interface.
- The ATM uplink requires an NMM module (of any type) attached to the same packet bus.
- Only one ATM uplink can be attached a given packet bus. If you have installed two ATM uplink modules in a single chassis, each must be attached to a different packet bus. Note that if you use the Management Module console interface to restore default settings for the ATM uplink, the uplink is automatically attached to packet bus one, even if a second ATM uplink is already attached to packet bus one.
- Each port in module on the same packet bus as an ATM uplink module should be assigned to exactly one VLAN. If a port is on more than one VLAN, the lowest numbered VLAN is the one the ATM uplink will use.
- If you have an ATM uplink and want to use 10Mbps or 100Mbps Ethernet ports as uplinks you must use an NMM-SEG-1.

- When the ES-4810 is running Spanning Tree protocol, with the ATM uplink providing a primary path and an Ethernet uplink providing a secondary link, if the ATM uplink is disconnected and later reconnected, the ATM uplink does not correctly re-establish the links. You must flush the LE_ARP Cache to restore all connections. (The connections are correctly established by the Ethernet secondary link while the ATM uplink is disconnected.)
- Each ATM uplink module is represented in the management module as a card containing one group with no ports. To display the MAC addresses learned by the ATM uplink, you must view the LE_ARP cache.
- If you are using an ATM uplink on a packet bus with an NMM-1 or NMM-2, you should not have any Ethernet ports on that same packet bus in any type of uplink forwarding mode. The NMM-SEG-1 does allow multiple uplink ports.
- RFC 1483-type connections are supported only through a single ATM uplink, not through a dual-uplink connection.

2.4 100BaseTX Auto-negotiation

- For auto-negotiation to work on copper 10/100 Mbps Ethernet ports, **both** speed and duplex must be configured as `auto`.

If you change the speed and/or duplex settings on a workstation's NIC that already has an established connection with the ES-4810, it may be necessary to unplug the Ethernet link and wait for some period of time (maybe a few minutes) then reconnect in order to establish a link.

- When connecting a legacy 100BaseTX partner (no auto-negotiation capability) with an ES-4810 100BaseTX port, set the speed and duplex of the ES-4810 port to match the link partner (i.e. do not set the ES-4810 100BaseTX port to auto speed or auto duplex).

For example, if the link partner is set to 100Mbps/full duplex or 100Mbps/half duplex, set the ES-4810 port to 100Mbps/full duplex or 100Mbps/half duplex accordingly.

3.0 Contacting Technical Support

In the U.S.A., customers can reach FORE Systems' Technical Assistance Center (TAC) using any one of the following methods:

1. Select the "Support" link from FORE's World Wide Web page:

<http://www.fore.com/>

2. Send questions, via e-mail, to:

support@fore.com

3. Telephone questions to "support" at:

800-671-FORE (3673) or 724-742-6999

4. FAX questions to "support" at:

724-742-7900

Technical support for customers outside the United States should be handled through the local distributor or via telephone at the following number:

+1 724-742-6999

No matter which method is used to reach the TAC, customers should be ready to provide the following:

- A support contract ID number
- The serial number of each product in question
- All relevant information describing the problem or question